

**WHAT IS CLAIMED IS:**

1. A method for promoting the expectoration of secretions from a patient's lungs, said method comprising the application of acoustic waves to the chest cavity of said patient through an acoustic transducer coupled to an acoustic coupling chamber, said acoustic coupling chamber being positioned adjacent an overlaying skin surface wherein said acoustic waves are of a frequency in a range of about 30 Hertz to about 120 Hertz.
2. A method as defined in claim 1, wherein said acoustic waves are sinusoidal.
3. A method according to claim 1, wherein said acoustic wave has a frequency in a range of about 30 Hertz to about 70 Hertz.
4. A method as defined in claim 1, wherein said acoustic waves pulsate for 0.5 seconds at a repetition of once every second.
5. A method as defined in claim 1, wherein said acoustic waves have an amplitude in a range of about 10 Watts to about 50 Watts.
6. A method as defined in claim 1, wherein said acoustic coupling chamber creates a gap in a range of about 1 to 2 inches between said acoustic transducer and said overlaying skin surface.
7. A method as defined in claim 1, wherein said acoustic transducer has a diameter in a range of about 3 to 6 inches.
8. A method according to claim 1, wherein said acoustic transducer is held by hand.
9. A method as defined in claim 1, wherein said acoustic transducer is held by a support member.
10. A method as defined in claim 1, wherein said acoustic transducer is positioned in a vest.
11. A device for assisting a patient in promoting the expectoration of secretions from the lungs, said device comprising:

a signal generator for generating an electrical signal;  
an amplifier for amplifying said electrical signal;  
an acoustic transducer for converting said amplified electrical signal into an acoustic wave; and  
an acoustic coupling chamber coupled to said acoustic transducer, such that when said device is in use, said acoustic coupling chamber is positioned adjacent an overlaying skin surface;  
wherein said acoustic waves are applied to the chest cavity of said patient through said acoustic coupling chamber, said acoustic waves having a frequency in a range of about 30 Hertz to about 120 Hertz.

12. A device as defined in claim 11, wherein said acoustic waves are sinusoidal.
13. A device as defined in claim 11, wherein said acoustic waves have a frequency in a range of about 30 Hertz to about 70 Hertz.
14. A device as defined in claim 11, wherein said acoustic waves pulsate for 0.5 seconds at a repetition of once every second.
15. A device as defined in claim 11, wherein said acoustic waves have an amplitude in a range of about 10 Watts to about 50 Watts.
16. A device as defined in claim 11, wherein said acoustic coupling chamber creates a gap in a range of about 1 to 2 inches between said acoustic transducer and said overlaying skin surface.
17. A device as defined in claim 11, wherein said acoustic coupling chamber is detachably coupled to said acoustic transducer.
18. The device as defined in claim 11, wherein said acoustic coupling chamber is composed of a sterilizable material.
19. The device as defined in claim 11, wherein said acoustic transducer has a diameter in a range of about 3 to 6 inches.

20. The device as defined in claim 11, wherein said acoustic transducer includes a support member.